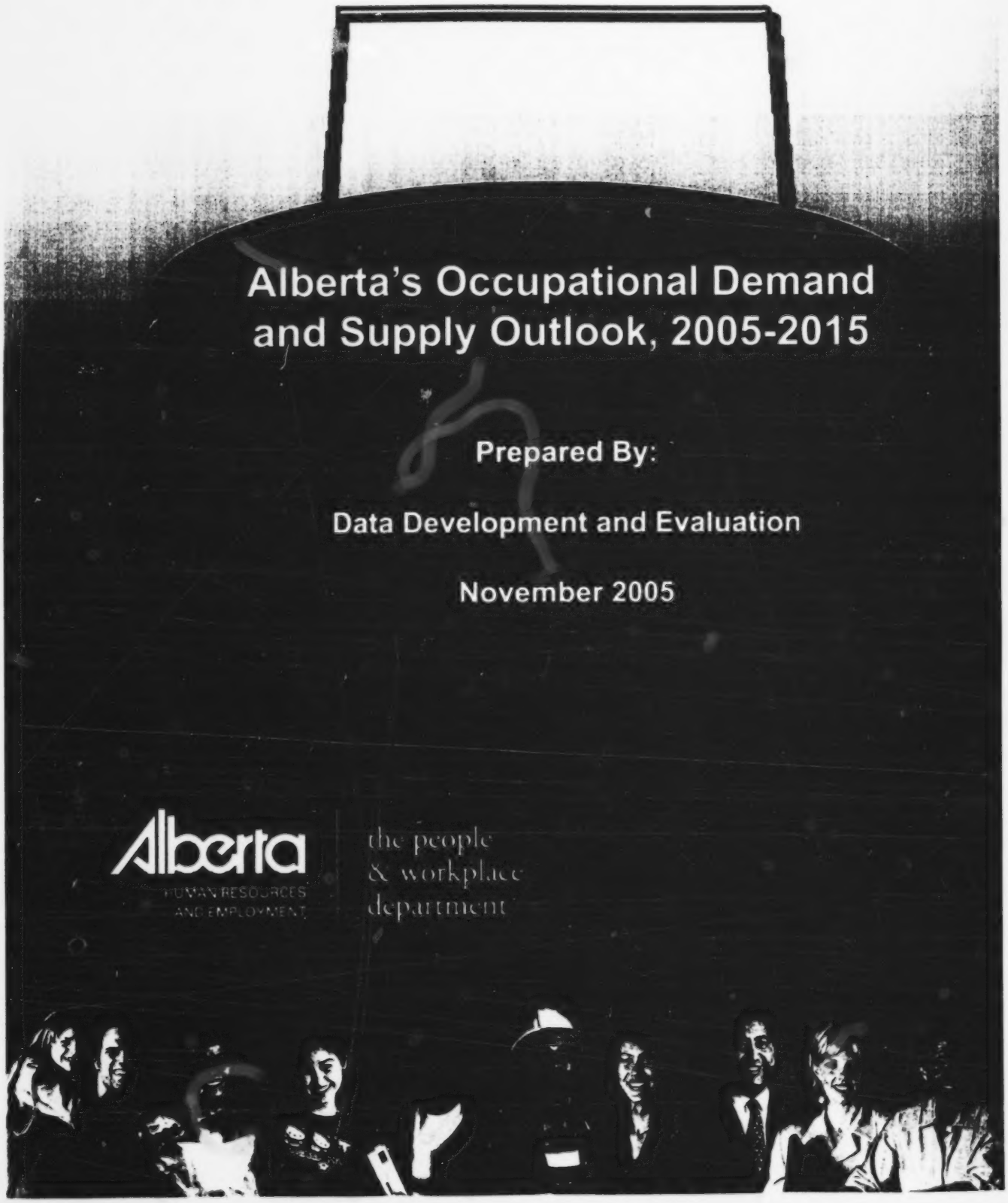


Alberta's Occupational Demand and Supply Outlook, 2005-2015

Prepared By:

Data Development and Evaluation

November 2005

Alberta
HUMAN RESOURCES AND EMPLOYMENT

the people & workplace department

106-06914/

Alberta Human Resources and Employment (AHRE) provides labour market information to assist both the government and the public in decision-making. Occupational demand and supply outlooks are affected by a variety of factors and will change over time. When making decisions based on projections, multiple sources of information should always be considered.

Work began on the Alberta Occupational Demand Outlook Model four years ago. Currently, it is able to predict occupational demand for 140 occupations for Alberta.

In 2003 work began on a counterpart model, the Alberta Occupational Supply Outlook Model, which helps provide insight into current labour market supply and possible supply and demand imbalances that may occur in the future. This year, the model has been adjusted to incorporate enhancements to the education sub-model and the education/occupation transformation matrix.

AHRE is continuing to enhance this model's precision and encourages readers to provide advice and feedback on its usefulness and opportunities for improvements to lfs.analyst@gov.ab.ca.

Background

Over the past two decades, Alberta has had the highest rate of economic growth and the highest employment rate in Canada. The demand for workers in Alberta's robust economy has led to a tight labour market and skill shortages in several occupational groups. An aging population, leading to anticipated retirements, may further compound the shortage of skilled labour.

To better understand and respond to this situation, Alberta Human Resources and Employment (AHRE) has developed both the Alberta Occupational Demand and Supply Outlook Models. Figure 1 provides an overview of the two models. These models are capable of projecting the demand and supply for 140 different occupations in Alberta for the period 2005-2015. By calculating imbalances between demand and supply, potential future occupational shortages or surpluses can be forecasted. Results from the two models help users to make better decisions about developing and funding programs and policies or personal decisions about education, jobs and careers.

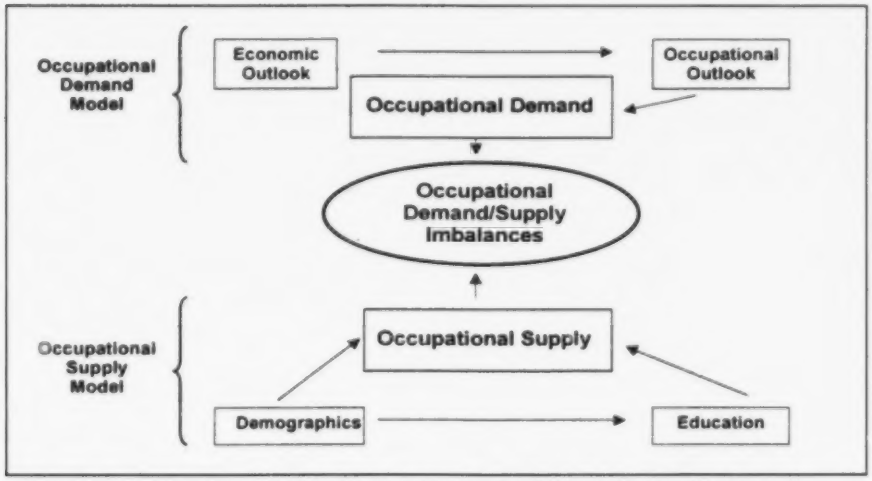


Figure 1: An Overview of the Occupational Demand and Supply Outlook Models

Background

Each model can be broken down into sub-models, which use many data sources. The Alberta Occupational Supply Outlook Model (AOSOM) has 30 linked sub-models and over 100,000 data series. The AOSOM has been developed recently and enhancements have been made to the original model. For example, more detailed data for post-secondary institutions was obtained from Alberta Advanced Education for the education sub-model, university certificates were grouped with college diplomas due to similar occupational outcomes, and data for retirements and other labour force separations[1] were obtained by age and occupation groups. In addition, further enhancements are planned for the next model to continue improving the data inputs. The Alberta Occupational Demand Outlook Model (AODOM) has been used for the past four years and has proven to be reliable.

Once occupational demand and supply have been projected, a simple ratio of demand/supply is calculated to measure imbalances. In an ideal or balanced labour market the ratio is one, whereas a ratio of greater than one indicates a potential shortage, as demand is greater than supply.

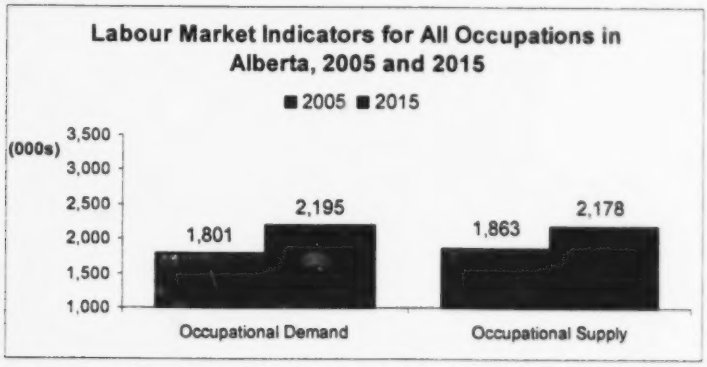
This year's findings of the two models are provided in this report. AHRE believes that continued work on and development of the AOSOM will help to provide important information on labour market imbalances. AHRE encourages readers to provide advice and feedback on the model's usefulness, construction and results. Please see Appendices A and B for a detailed view of the model's methodology and assumptions.

[1] **Labour force separations:** Any reason other than retirement for leaving the labour force. Some examples would include death, disability, and migration.

Overall Occupational Outlook

An increase of nearly 400,000 jobs in the labour market is projected between 2005 and 2015, as the overall occupational demand increases at an annual average of 1.9%. A net increase of 314,400 workers will join the labour force, as occupational supply increases at an annual rate of 1.6%. It is expected that in 2005 occupational supply will exceed demand but, in contrast, demand is projected to exceed supply by 2015. Chart 1 shows more detailed information about the labour market indicators for an aggregate of all occupations in Alberta.

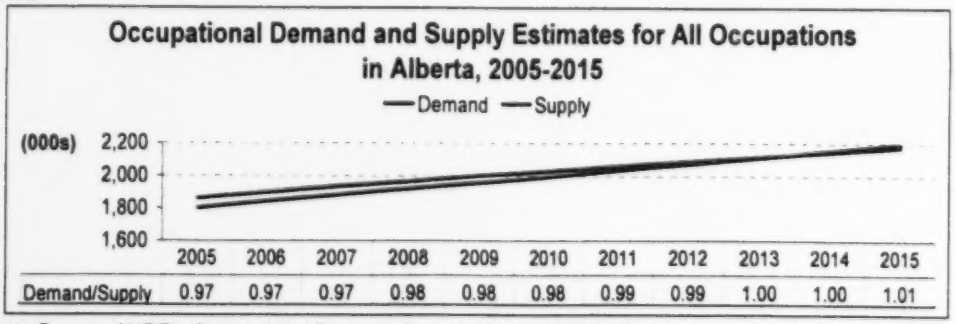
Chart 1



Data Source: AHRE's Occupational Demand Outlook Model, AHRE's Occupational Supply Outlook Model

Chart 2 presents the trends of occupational demand and supply for all occupations in Alberta over the forecast period. In 2005, occupational supply exceeds demand by 62,848 individuals. The difference between occupational supply and demand narrows until 2014, when it is projected that demand will begin to exceed supply. By the end of the forecast period, the projected occupational demand exceeds supply by 16,853 individuals. For a listing of occupational demand and supply projections, along with forecasted imbalances, for all 140 occupations, please see Appendix E.

Chart 2



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Demand/Supply	0.97	0.97	0.97	0.98	0.98	0.98	0.99	0.99	1.00	1.00	1.01

Data Source: AHRE's Occupational Demand Outlook Model, AHRE's Occupational Supply Outlook Model

Table 1 shows the difference between occupational supply and demand in 2005 and 2015 for those occupations expected to see the fastest growing occupational shortages. Occupations in Food and Beverage Services show the largest projected difference in 2015 of 5,957 positions. Cashiers are also anticipated to experience a large supply shortage, starting the forecast period with a surplus of 1,566 individuals, and moving to a shortage of 5,432 people by 2015. While less than half of the occupations in Table 1 are expected to begin the forecast period with a shortage, all of the occupations are projected to finish the forecast period with a labour shortage. For the methodology on how the fastest growing occupational supply shortages are calculated, please see Appendix C. The 15 occupations with the fast growing shortages are given in more detail in Appendix D.

Labour market shortages are partly due to the number of older workers in these occupations. Throughout the forecast period, more individuals in these occupations will retire from their jobs than will enter the occupation. However, shortages may not be as severe as forecasted because the training times for a number of these occupations are fairly short and trades apprentices may be integrated into their professions more rapidly in the future. This means that occupational supply may be more responsive to labour market tightening in these professions.

Table 1

Occupational Supply Minus Demand for Selected Occupations with the Fastest Growing Occupational Shortages, 2005 and 2015

	Supply Minus Demand		First Year of Shortage
	2005	2015	
Technical occupations in dental health care	-162	-760	2005
Electrical trades & telecommunications occupations	91	-3,595	2006
Masonry & plastering trades	-46	-1,409	2005
Cashiers	1,566	-5,432	2008
Plumbers, pipefitters & gas fitters	629	-1,679	2008
Facility operation & maintenance managers	1,364	-727	2009
Carpenters & cabinetmakers	341	-3,077	2006
Occupations in food & beverage service	2,398	-5,957	2009
Machinery & transportation equipment mechanics	-231	-3,917	2005
Metal forming, shaping & erecting trades	788	-2,633	2008

Data Source: AHRE's Occupational Demand Outlook Model, AHRE's Occupational Supply Outlook Model

Occupational Supply Surpluses

Table 2 displays the professions that show the fastest growing occupational surpluses during the forecast period of 2005 to 2015. Within this group, Contractors, Operators and Supervisors in Agriculture, Horticulture and Aquaculture occupations are expected to see the greatest surplus of workers, of approximately 13,700 individuals, by 2015. Secondary & elementary school teachers & educational counsellors are also expected to see a large growth in labour surplus, with a surplus of 1,019 individuals in 2005 increasing to 6,761 individuals by 2015. All but one of the occupations are expected to begin the forecast period with an occupational surplus. For the methodology on how the fastest growing occupational supply surpluses are calculated, please see Appendix C. The 15 occupations with the fastest growing surpluses are given in more detail in Appendix D.

The growing surplus expected for many of these occupations reflect the rising enrolment and graduation rates in post-secondary institutions in Alberta. Within these occupations, females are expected to show increasing enrolment and graduation rates.

Table 2

Occupational Supply Minus Demand for Selected Occupations With the Fastest Growing Occupational Surpluses, 2005 and 2015

	Supply Minus Demand		Year of First Surplus
	2005	2015	
Contractors, operators & supervisors in agriculture, horticulture & aquaculture	3,773	13,702	2005
Psychologists, social workers, counsellors, clergy & probation officers	106	3,505	2005
Judges, lawyers & Quebec notaries	179	1,972	2005
Sales, marketing & advertising managers	1,004	2,591	2005
Librarians, archivists, conservators & curators	28	483	2005
Managers in financial & business services	391	1,789	2005
Agriculture & horticulture workers	216	2,956	2005
Legislators & senior management	-307	2,245	2009
Secondary & elementary school teachers & educational counsellors	1,019	6,761	2005
Policy & program officers, researchers & consultants	186	2,092	2005

Data Source: AHRE's Occupational Demand Outlook Model, AHRE's Occupational Supply Outlook Model

Conclusion

Over the forecast period 2005 to 2015, using both the Alberta Occupational Demand and Supply Outlook Models, potential labour imbalances for 140 different occupations can be anticipated. It should be noted that both of these models make projections and therefore carry assumptions that may change in the future. Hence, a labour shortage or surplus may not be as severe as the models predict. For example, as occupational demand and supply conditions change, individuals may decide to enter a field of study that reflects these current conditions and more people may be attracted to the province. The results of these models are intended as indicators of where the current situation in Alberta may lead in future years.

Alberta Occupational Demand and Supply Outlook Models' Methodologies

Figure 2 provides a detailed view of how occupational demand and supply imbalances are projected.

Two main components in the Alberta Occupational Demand Outlook Model (AODOM) are the economic and occupational components. The economic component produces an outlook of Alberta's economy. Once the performance of the economy is projected, the occupational component calculates the employment that is required to maintain the projected growth. The model projects employment for 140 occupations across 14 industries.

The Alberta Occupational Supply Outlook Model (AOSOM) makes occupational supply projections with a series of transformations that begin with a demographic outlook and end with occupational supply for 140 occupations. The model has three major components: demographic, education and replacement demand. Education has a central importance in this model because of its role in training the labour force.

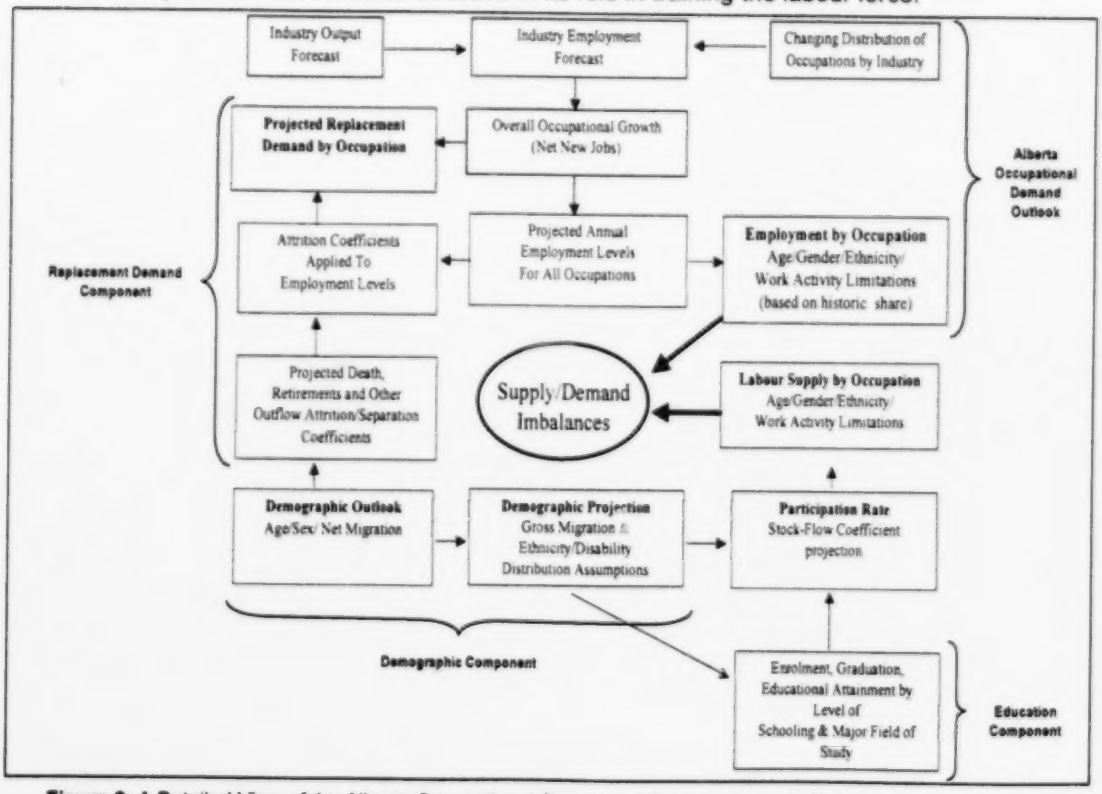

Industry Output Forecast
Industry Employment Forecast
Changing Distribution of Occupations by Industry
Projected Replacement Demand by Occupation
Overall Occupational Growth (Net New Jobs)
Alberta Occupational Demand Outlook
Attrition Coefficients Applied To Employment Levels
Projected Annual Employment Levels For All Occupations
Employment by Occupation Age/Gender/Ethnicity/ Work Activity Limitations (based on historic share)
Replacement Demand Component
Projected Death, Retirements and Other Outflow Attrition/Separation Coefficients
Supply/Demand Imbalances
Labour Supply by Occupation Age/Gender/Ethnicity/ Work Activity Limitations
Demographic Outlook Age/Sex/ Net Migration
Demographic Projection Gross Migration & Ethnicity/Disability Distribution Assumptions
Participation Rate Stock-Flow Coefficient projection
Demographic Component
Enrolment, Graduation, Educational Attainment by Level of Schooling & Major Field of Study
Education Component

Figure 2: A Detailed View of the Alberta Occupational Supply and Demand Outlook Models

Alberta Occupational Supply Outlook Model Assumptions

As with all forecasts, a number of assumptions are used to derive the results. The model can utilize different assumptions to test various economic scenarios. The assumptions used to generate the results in Appendix E are set out below.

Alberta's Key Economic Indicators

- The average annual growth rate for the Gross Domestic Product (GDP) is 3.3%.
- The average annual unemployment rate is 4.9%.
- The average annual participation rate is 73.4%.
- The high level of investment in the province is expected to continue.

Demographic Component

- To forecast the population levels of age and gender groups, a share approach[1] based on the population from the 2001 census is applied to the current population estimates.

Migration

- The level of out-migration is equal to the historic five-year average from 1999 to 2003.
- The level of in-migration equals the projected net-migration plus the assumed out-migration.
- Age and gender distributions for net-migration are equal to the age and gender distributions for in-migration and out-migration.

Aboriginals

- The Alberta aboriginal population's birth and death rates are the same as the Canadian aboriginal population's rates.

Visible Minorities

- The visible minorities' age/gender birth and death rates are equal to the Alberta general population's birth and death rates.
- The visible minorities' less than 15 years old age groups (less than 1, 1-3, 4-9, 10-15 years) are assumed to have the same distributions as the Alberta younger age groups.

---

[1] **Share Approach:** A method to estimate the future number of people in a group of interest. The proportion of the group of interest to the general population is applied to the forecasted general population estimates to find the predicted group of interest's population. **Example:**

The proportion at time t		Is Mutiplied by the Projected Alberta Population for time t+1		To find the projected number of people with activities limitations for time t+1
$\left[\frac{\text{Activity Limitations}}{\text{Alberta Population}}\right]_t$	x	Alberta Population Projection $_{t+1}$	=	Activity Limitation Population $_{t+1}$

Demographic Component (Cont.)

Activity Limitations

- To calculate the number of people with activity limitations, a share approach by age and gender was used.

Education Component

Enrolment & Graduation

- The number of people who attend or complete school is calculated as a share of the total number in that age or gender group. This proportion is based on historic shares.
- Enrolment rates increase at the same rate as the average of the high and low enrolment rate projections that were conducted by Alberta Learning.
- Migration rates by educational attainment are constant and were applied to the projected total migration levels.
- The age and gender distributions for new university graduates are projected with the same age and gender distributions from the educational attainment data.
- To calculate the number of college and trades graduates, the ratio of college and trades graduates to the general population is used. This value is then adjusted to ensure that the ratio of university graduates to college and trades graduates remains constant.
- The overall ratio of university to college and trades graduates is applied to the different age groups to project the number of college and trades graduates within each age group.
- Overall drop out rates and mature student rates are used for the different major fields of study.

Educational Attainment

- To calculate the number of people with university, college and trades, and high school education, a stock-flow approach[2] is used.
- Those with less than a high school education are determined to be those not already accounted for in other educational attainment categories.
- Less than high school educational attainment is adjusted to reflect the estimated portion of mature students in post-secondary institutions that do not have a high school diploma. High school educational attainment is also adjusted to subtract recent graduates from university and college and trades.
- The overall enrolment rate for mature students is used for all age groups within the mature student category.

---

[2] **Stock-Flow Approach:** A method in estimating the future population of people in a group of interest. To find the forecasted population, the population from the previous year is adjusted to add those expected to enter that group and subtract those that are expected to leave that group. **Example:**

Number of people with College/Trades Training $_{t+1}$	=	Number of people with College/Trades Training $_{t}$	plus	Recent Graduates of College/Trades $_{t+1}$	minus	People Leaving Group due to death, retirement, etc. $_{t+1}$

Education Component (Cont.)

Educational Attainment (Cont.)

- To project educational attainment by major field of study, the historic relative enrolment rate is maintained over the projected period.
- The share of new graduates by major field of study and migration are constant over time.
- University transfer programs are included as university enrollment and university certificates are classified as college and technical.

Replacement Demand Component

- Retirement rates are derived from Alberta Labour Force Survey (LFS) data, at a fairly aggregate occupational level.
- Retirement by occupation uses the age distribution in that occupation given by the LFS. As people working in a specific occupation enter the average age of retirement for that gender group, they will be considered retired.
- Emigration, out-migration and death rates are assumed to be the same for those employed as the general population for a particular age/gender group.

Occupational Component

- Potential occupational supply is distributed over the various demographic groups using historical distributions of population and educational attainment.
- Potential occupational supply is translated into actual occupational supply by using historic participation rates by occupation.
- Each detailed occupation (NOC-140) has the same distribution of major field of study as it did in major occupation groups (NOC-47).
- The estimated number of individuals by occupation, age and gender is scaled up to ensure that, in general, the relative balance between labour supply and demand in 2001 is maintained.

Calculating the Fastest Growing Shortages and Surpluses

To measure occupational shortages and surpluses, a ratio for each occupation is calculated:

$$\frac{\text{Occupational Demand}}{\text{Occupational Supply}} \qquad (1)$$

A ratio less than one indicates that supply is greater than demand, a **supply surplus**. A ratio greater than one occurs if demand is greater than supply, a **supply shortage**.

For each year in the forecast period the growth rate of the demand/supply ratio is calculated using the following formula:

$$\left[\frac{\left[\frac{\text{Demand}}{\text{Supply}}\right]_{t} \text{ minus } \left[\frac{\text{Demand}}{\text{Supply}}\right]_{t-1}}{\left[\frac{\text{Demand}}{\text{Supply}}\right]_{t-1}}\right] \times 100 \qquad (2)$$

Then, the average annual growth rate for the demand/supply ratio is calculated for each of the 140 occupations. The average annual growth rate is a simple mean of the yearly growth rates for the period 2005 to 2015.

The highest demand/supply average annual growth rates identify the occupations with the fastest growing shortages. The lowest average annual growth rates find the occupations with the fastest growing surplus during the forecast period.

Example a: An average growth rate of 2.0% indicates that occupational demand will grow 2.0 percentage points higher than occupational supply on average each year.

Example b: An average growth rate of –0.7% indicates that occupational supply will grow 0.7 percentage points higher than occupational demand on average each year.

Occupations with the Fastest Growing Shortages and Surpluses

Occupational Demand/Supply Ratio* and Growth Rates for Occupations with the Fastest Growing Shortages, 2005-2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average Annual Growth Rate (%), 2005-2015
Machine operators & related workers in textile processing	0.73	0.70	0.89	0.91	0.96	0.95	0.92	0.93	0.93	0.94	0.94	
Demand/Supply Growth Rate (%)	9.4	-4.0	26.6	2.3	8.2	-3.3	-2.6	0.9	0.2	0.5	0.2	**3.5**
Transportation officers & controllers	1.14	1.11	1.17	1.19	1.17	1.18	1.18	1.19	1.20	1.21	1.22	
Demand/Supply Growth Rate (%)	17.5	-2.1	5.1	1.4	-1.5	1.3	-0.2	0.7	0.7	0.8	0.7	**2.2**
Technical occupations in libraries, archives, museums & art galleries	1.00	1.06	1.05	1.20	1.16	1.22	1.21	1.22	1.24	1.25	1.24	
Demand/Supply Growth Rate (%)	0.0	6.4	-0.9	13.6	-3.5	5.4	-0.9	1.2	1.2	1.2	-1.3	**2.1**
Other transport equipment operators & related workers	1.10	1.06	1.11	1.16	1.16	1.19	1.19	1.20	1.21	1.22	1.23	
Demand/Supply Growth Rate (%)	9.6	-3.7	5.1	4.5	0.3	2.6	0.1	0.8	0.8	0.9	0.8	**2.0**
Technical occupations in dental health care	1.05	1.05	1.15	1.18	1.21	1.22	1.22	1.22	1.22	1.22	1.23	
Demand/Supply Growth Rate (%)	4.9	0.2	9.6	2.0	3.0	0.5	0.2	0.1	0.1	0.2	0.2	**1.9**
Electrical trades & telecommunications occupations	1.00	1.02	1.03	1.04	1.06	1.08	1.10	1.12	1.13	1.15	1.16	
Demand/Supply Growth Rate (%)	5.2	2.0	1.7	0.9	1.3	2.0	2.0	1.6	1.4	1.4	1.5	**1.9**
Fishing vessel masters & skippers & fishermen	0.98	0.96	1.09	1.11	1.12	1.14	1.14	1.14	1.15	1.13	1.15	
Demand/Supply Growth Rate (%)	4.0	-1.2	13.2	1.3	1.4	1.2	0.0	0.0	1.2	-1.3	1.2	**1.9**
Masonry & plastering trades	1.00	1.04	1.07	1.09	1.07	1.09	1.10	1.11	1.12	1.12	1.13	
Demand/Supply Growth Rate (%)	7.2	3.9	2.3	2.3	-1.8	1.8	0.7	0.9	0.6	0.6	0.9	**1.8**
Cashiers	0.96	0.98	0.99	1.02	1.04	1.06	1.08	1.10	1.12	1.13	1.15	
Demand/Supply Growth Rate (%)	1.0	2.3	1.4	3.2	1.5	2.1	2.1	1.7	1.6	1.2	1.4	**1.8**
Plumbers, pipefitters & gas fitters	0.95	0.98	0.99	1.00	1.02	1.04	1.06	1.08	1.09	1.10	1.12	
Demand/Supply Growth Rate (%)	2.4	2.9	1.0	1.4	2.0	2.0	2.1	1.3	1.1	1.1	1.7	**1.7**
Facility operation & maintenance managers	0.79	0.76	0.82	0.83	1.02	1.04	1.11	1.11	1.11	1.12	1.12	
Demand/Supply Growth Rate (%)	-19.5	-3.8	7.4	1.3	23.7	1.9	6.4	0.3	0.3	0.4	0.4	**1.7**
Carpenters & cabinetmakers	0.98	1.01	1.03	1.04	1.05	1.07	1.08	1.09	1.10	1.12	1.13	
Demand/Supply Growth Rate (%)	3.8	2.9	1.3	1.4	0.8	1.6	1.5	1.1	1.0	1.1	1.4	**1.6**
Occupations in food & beverage service	0.94	0.95	0.98	1.00	1.04	1.05	1.08	1.10	1.12	1.13	1.15	
Demand/Supply Growth Rate (%)	-3.3	1.2	2.8	2.3	3.8	1.7	2.2	1.8	1.7	1.6	1.4	**1.6**
Machinery & transportation equipment mechanics (except motor vehicle)	1.01	1.02	1.04	1.05	1.07	1.08	1.10	1.11	1.13	1.14	1.16	
Demand/Supply Growth Rate (%)	3.1	1.1	1.5	1.8	1.1	1.5	1.4	1.2	1.4	1.4	1.4	**1.5**
Metal forming, shaping & erecting trades	0.97	0.99	1.00	1.02	1.02	1.03	1.05	1.06	1.07	1.08	1.10	
Demand/Supply Growth Rate (%)	3.2	2.5	0.4	2.0	0.1	1.7	1.1	1.3	1.2	1.2	1.2	**1.4**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Occupations with the Fastest Growing Shortages and Surpluses (Cont.)

Occupational Demand/Supply Ratio* and Growth Rates for Occupations with the Fastest Growing Surpluses, 2005-2015

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Average Annual Growth Rate (%), 2005-2015
Managers in art, culture, recreation & sport	0.85	0.78	0.82	0.74	0.80	0.78	0.79	0.79	0.78	0.78	0.77	
Demand/Supply Growth Rate (%)	-14.3	-9.7	7.2	-9.9	8.9	-2.6	1.1	-0.7	-0.7	-0.4	-0.5	-2.0
Contractors, operators & supervisors in agriculture, horticulture & aqua.	0.94	0.90	0.89	0.88	0.88	0.87	0.85	0.84	0.83	0.82	0.80	
Demand/Supply Growth Rate (%)	-5.9	-4.0	-1.4	-0.6	-0.4	-1.3	-1.4	-1.6	-1.5	-1.4	-1.4	-1.9
Psychologists, social workers, counsellors, clergy & probation officers	0.99	1.00	1.01	0.97	0.92	0.89	0.87	0.85	0.84	0.82	0.81	
Demand/Supply Growth Rate (%)	0.0	0.5	1.4	-4.4	-4.7	-2.8	-2.8	-1.8	-1.8	-1.7	-1.5	-1.8
Judges, lawyers & Quebec notaries	0.97	0.95	0.93	0.90	0.89	0.87	0.85	0.84	0.83	0.82	0.81	
Demand/Supply Growth Rate (%)	-1.1	-2.7	-1.7	-3.3	-1.7	-2.2	-1.8	-1.6	-1.2	-1.0	-1.0	-1.7
Managers in communication (except broadcasting)	0.97	1.03	0.97	0.94	0.85	0.84	0.82	0.82	0.83	0.83	0.83	
Demand/Supply Growth Rate (%)	-3.4	6.4	-5.8	-3.0	-9.6	-1.5	-2.0	0.3	0.3	0.4	0.3	-1.6
Sales, marketing & advertising managers	0.92	0.88	0.87	0.85	0.87	0.86	0.86	0.85	0.84	0.83	0.82	
Demand/Supply Growth Rate (%)	-6.2	-4.5	-1.0	-2.8	3.1	-1.5	0.0	-1.2	-1.1	-1.0	-1.0	-1.6
Announcers & other performers	1.05	1.03	1.02	1.04	0.99	0.99	0.97	0.98	0.98	0.98	0.99	
Demand/Supply Growth Rate (%)	-11.3	-1.4	-1.0	2.2	-5.6	0.2	-1.5	0.3	0.4	0.4	0.4	-1.6
Librarians, archivists, conservators & curators	0.98	1.02	0.95	0.91	0.87	0.84	0.82	0.81	0.80	0.79	0.78	
Demand/Supply Growth Rate (%)	5.5	3.8	-6.5	-4.2	-5.1	-2.6	-2.1	-1.4	-1.4	-1.2	-1.2	-1.5
Managers in financial & business services	0.94	0.99	0.91	0.87	0.84	0.83	0.83	0.84	0.84	0.84	0.85	
Demand/Supply Growth Rate (%)	-5.5	4.7	-7.8	-4.9	-2.9	-1.4	0.3	0.5	0.5	0.3	0.2	-1.5
Agriculture & horticulture workers	0.98	1.00	0.96	0.95	0.88	0.87	0.85	0.84	0.83	0.82	0.82	
Demand/Supply Growth Rate (%)	2.2	1.3	-3.4	-1.3	-7.3	-1.5	-2.4	-1.1	-0.7	-0.8	-0.9	-1.4
Managers in protective service	1.03	1.05	1.00	1.00	0.94	0.93	0.91	0.91	0.90	0.90	0.89	
Demand/Supply Growth Rate (%)	-3.0	2.1	-4.4	-0.5	-5.9	-0.8	-1.9	-0.7	-0.6	-0.6	-0.5	-1.5
Legislators & senior management	1.04	1.17	1.04	1.03	0.92	0.91	0.88	0.88	0.87	0.86	0.86	
Demand/Supply Growth Rate (%)	3.8	13.1	-11.7	-0.6	-10.8	-1.4	-2.6	-0.7	-0.7	-0.7	-0.7	-1.2
Secondary & elementary school teachers & educational counsellors	0.97	1.00	0.98	0.95	0.93	0.91	0.90	0.89	0.88	0.87	0.87	
Demand/Supply Growth Rate (%)	-0.9	2.8	-1.6	-3.3	-2.5	-2.3	-1.3	-1.1	-0.9	-0.7	-0.2	-1.1
Policy & program officers, researchers & consultants	0.98	0.99	0.98	0.94	0.92	0.90	0.89	0.88	0.87	0.87	0.86	
Demand/Supply Growth Rate (%)	1.2	1.3	-1.1	-4.1	-2.6	-2.1	-1.3	-0.9	-0.8	-0.7	-0.7	-1.1
Managers in other services	1.03	1.00	1.01	0.89	0.90	0.87	0.88	0.88	0.88	0.88	0.88	
Demand/Supply Growth Rate (%)	2.9	-2.8	1.2	-11.7	0.3	-2.4	0.1	0.2	0.2	0.2	0.3	-1.0

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
All Occupations												
Demand Projection	1,800,625	1,842,369	1,880,748	1,920,353	1,955,921	1,994,959	2,034,730	2,073,461	2,112,698	2,152,836	2,194,730	
Supply Projection	1,863,473	1,899,184	1,935,410	1,967,313	2,000,758	2,030,323	2,061,081	2,090,621	2,119,305	2,148,377	2,177,877	
Demand/Supply*	0.966	0.970	0.972	0.976	0.978	0.983	0.987	0.992	0.997	1.002	1.008	**0.985**
Legislators & senior management												
Demand Projection	8,432	8,985	9,500	10,003	10,476	10,972	11,477	11,973	12,488	13,015	13,558	
Supply Projection	8,125	7,654	9,169	9,713	11,406	12,117	13,012	13,670	14,354	15,071	15,803	
Demand/Supply	1.038	1.174	1.036	1.030	0.918	0.906	0.882	0.876	0.870	0.864	0.858	**0.950**
Administrative services managers												
Demand Projection	11,235	11,581	11,918	12,246	12,568	12,889	13,215	13,534	13,866	14,205	14,554	
Supply Projection	11,506	12,151	12,639	12,881	13,341	13,658	14,064	14,452	14,844	15,240	15,643	
Demand/Supply	0.976	0.953	0.943	0.951	0.942	0.944	0.940	0.936	0.934	0.932	0.930	**0.944**
Managers in engineering, architecture, science & information systems												
Demand Projection	4,676	4,837	4,996	5,145	5,284	5,418	5,557	5,699	5,862	6,035	6,211	
Supply Projection	4,864	5,023	5,209	5,398	5,759	5,906	6,109	6,254	6,425	6,610	6,796	
Demand/Supply	0.961	0.963	0.959	0.953	0.917	0.917	0.910	0.911	0.912	0.913	0.914	**0.930**
Sales, marketing & advertising managers												
Demand Projection	11,926	11,951	11,973	11,997	12,018	12,041	12,065	12,088	12,112	12,135	12,160	
Supply Projection	12,930	13,574	13,731	14,157	13,758	13,997	14,027	14,218	14,401	14,578	14,751	
Demand/Supply	0.922	0.880	0.872	0.847	0.874	0.860	0.860	0.850	0.841	0.832	0.824	**0.860**
Facility operation & maintenance managers												
Demand Projection	5,095	5,239	5,396	5,555	5,713	5,876	6,041	6,194	6,349	6,505	6,669	
Supply Projection	6,459	6,903	6,618	6,725	5,593	5,646	5,457	5,581	5,702	5,820	5,942	
Demand/Supply	0.789	0.759	0.815	0.826	1.021	1.041	1.107	1.110	1.113	1.118	1.122	**0.984**
Managers in retail trade												
Demand Projection	34,583	35,367	36,225	37,233	38,287	39,402	40,462	41,377	42,225	43,035	43,969	
Supply Projection	35,455	37,165	38,534	40,102	40,942	41,894	42,646	43,320	43,885	44,383	44,925	
Demand/Supply	0.975	0.952	0.940	0.928	0.935	0.941	0.949	0.955	0.962	0.970	0.979	**0.953**
Managers in food service & accommodation												
Demand Projection	18,014	18,589	19,202	19,797	20,334	20,834	21,341	21,854	22,350	22,822	23,286	
Supply Projection	17,920	18,337	18,691	19,176	19,838	20,239	20,626	20,913	21,172	21,419	21,644	
Demand/Supply	1.005	1.014	1.027	1.032	1.025	1.029	1.035	1.045	1.056	1.065	1.076	**1.037**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015 (Cont.)

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Managers in financial & business services												
Demand Projection	6,695	7,122	7,465	7,793	8,113	8,390	8,650	8,927	9,206	9,483	9,755	
Supply Projection	7,086	7,201	8,188	8,989	9,637	10,110	10,397	10,677	10,955	11,247	11,544	
Demand/Supply*	0.945	0.989	0.912	0.867	0.842	0.830	0.832	0.836	0.840	0.843	0.845	**0.871**
Managers in communication (except broadcasting)												
Demand Projection	998	1,020	1,047	1,076	1,105	1,134	1,162	1,189	1,217	1,246	1,274	
Supply Projection	1,033	992	1,081	1,145	1,301	1,356	1,418	1,446	1,475	1,504	1,533	
Demand/Supply	0.966	1.028	0.969	0.940	0.849	0.837	0.819	0.822	0.825	0.828	0.831	**0.883**
Managers in health, education, social & community services												
Demand Projection	9,444	9,613	9,775	9,938	10,104	10,289	10,500	10,727	10,969	11,224	11,495	
Supply Projection	9,830	10,149	10,372	10,578	10,933	11,210	11,535	11,839	12,147	12,457	12,771	
Demand/Supply	0.961	0.947	0.942	0.940	0.924	0.918	0.910	0.906	0.903	0.901	0.900	**0.923**
Managers in public administration												
Demand Projection	3,237	3,265	3,295	3,324	3,352	3,382	3,413	3,443	3,475	3,506	3,538	
Supply Projection	3,300	3,340	3,358	3,135	3,085	3,042	3,063	3,097	3,130	3,163	3,196	
Demand/Supply	0.981	0.978	0.981	1.060	1.087	1.112	1.114	1.112	1.110	1.108	1.107	**1.068**
Managers in art, culture, recreation & sport												
Demand Projection	1,214	1,241	1,272	1,303	1,336	1,370	1,403	1,436	1,468	1,502	1,535	
Supply Projection	1,436	1,625	1,553	1,766	1,662	1,749	1,772	1,826	1,880	1,932	1,985	
Demand/Supply	0.845	0.764	0.819	0.738	0.804	0.783	0.792	0.786	0.781	0.777	0.773	**0.788**
Managers in protective service												
Demand Projection	798	817	837	857	878	899	921	943	965	986	1009	
Supply Projection	777	779	835	859	935	965	1008	1039	1070	1100	1131	
Demand/Supply	1.027	1.049	1.002	0.998	0.939	0.932	0.914	0.908	0.902	0.896	0.893	**0.951**
Managers in other services												
Demand Projection	2,085	2,147	2,216	2,284	2,354	2,420	2,485	2,551	2,624	2,699	2,776	
Supply Projection	2,026	2,147	2,189	2,555	2,626	2,766	2,837	2,907	2,983	3,063	3,142	
Demand/Supply	1.029	1.000	1.012	0.894	0.896	0.875	0.876	0.878	0.880	0.881	0.884	**0.919**
Managers in construction & transportation												
Demand Projection	20,704	21,496	21,887	22,371	22,474	22,932	23,389	23,851	24,257	24,702	25,180	
Supply Projection	20,368	20,770	21,064	21,329	21,480	21,688	21,894	22,123	22,336	22,551	22,732	
Demand/Supply	1.017	1.035	1.039	1.049	1.046	1.057	1.068	1.078	1.086	1.095	1.108	**1.062**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015 (Cont.)

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Managers in primary production (except agriculture)												
Demand Projection	3,519	3,631	3,711	3,763	3,832	3,913	4,011	4,092	4,167	4,238	4,303	
Supply Projection	3,703	3,412	3,269	3,287	3,277	3,406	3,483	3,574	3,647	3,712	3,772	
Demand/Supply*	0.950	1.064	1.135	1.145	1.169	1.149	1.152	1.145	1.143	1.142	1.141	**1.121**
Managers in manufacturing & utilities												
Demand Projection	6,229	6,390	6,601	6,779	6,971	7,133	7,308	7,471	7,653	7,845	8,039	
Supply Projection	5,912	6,079	6,141	6,600	6,955	7,143	7,334	7,443	7,572	7,704	7,845	
Demand/Supply	1.054	1.051	1.075	1.027	1.002	0.999	0.996	1.004	1.011	1.018	1.025	**1.024**
Auditors, accountants & investment professionals												
Demand Projection	32187	33112	33935	34702	35443	36138	36838	37556	38331	39127	39924	
Supply Projection	32942	33532	34618	36021	37803	39000	40209	41263	42392	43497	44585	
Demand/Supply	0.977	0.987	0.980	0.963	0.938	0.927	0.916	0.910	0.904	0.900	0.895	**0.936**
Human resources & business service professionals												
Demand Projection	13,494	13,683	13,874	14,053	14,228	14,393	14,562	14,736	14,933	15,139	15,348	
Supply Projection	14,201	14,495	14,769	15,046	15,297	15,557	15,806	16,055	16,298	16,537	16,772	
Demand/Supply	0.950	0.944	0.939	0.934	0.930	0.925	0.921	0.918	0.916	0.915	0.915	**0.928**
Finance & insurance administrative occupations												
Demand Projection	34,290	34,977	35,540	36,120	36,620	37,152	37,674	38,198	38,734	39,283	39,845	
Supply Projection	34,667	35,176	35,533	35,903	36,177	36,487	36,772	37,059	37,327	37,585	37,838	
Demand/Supply	0.989	0.994	1.000	1.006	1.012	1.018	1.025	1.031	1.038	1.045	1.053	**1.019**
Secretaries, recorders & transcriptionists												
Demand Projection	22,929	23,810	24,594	25,382	26,083	26,855	27,653	28,468	29,329	30,227	31,161	
Supply Projection	24,984	27,467	29,290	30,432	31,302	31,929	32,575	33,224	33,888	34,568	35,294	
Demand/Supply	0.918	0.867	0.840	0.834	0.833	0.841	0.849	0.857	0.865	0.874	0.883	**0.860**
Administrative & regulatory occupations												
Demand Projection	37,091	37,970	38,758	39,532	40,249	40,998	41,757	42,514	43,293	44,090	44,910	
Supply Projection	37,932	38,509	39,049	39,526	40,078	40,588	41,115	41,611	42,094	42,573	43,051	
Demand/Supply	0.978	0.986	0.993	1.000	1.004	1.010	1.016	1.022	1.028	1.036	1.043	**1.011**
Clerical supervisors												
Demand Projection	12,122	12,298	12,483	12,667	12,849	13,028	13,206	13,378	13,557	13,738	13,925	
Supply Projection	12,325	12,441	12,537	12,636	12,709	12,788	12,857	12,928	12,992	13,054	13,115	
Demand/Supply	0.984	0.988	0.996	1.002	1.011	1.019	1.027	1.035	1.043	1.052	1.062	**1.020**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015 (Cont.)

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Clerical occupations, general office skills												
Demand Projection	27,151	28,390	29,569	30,731	31,844	32,994	34,170	35,343	36,563	37,811	39,106	
Supply Projection	28,979	31,677	33,686	35,905	37,948	39,084	40,215	41,077	41,946	42,841	43,766	
Demand/Supply*	0.937	0.896	0.878	0.856	0.839	0.844	0.850	0.860	0.872	0.883	0.894	**0.873**
Office equipment operators												
Demand Projection	8,814	8,986	9,164	9,340	9,515	9,686	9,857	10,024	10,201	10,383	10,568	
Supply Projection	9,197	9,331	9,461	9,566	9,661	9,720	9,766	9,804	9,840	9,875	9,913	
Demand/Supply	0.958	0.963	0.969	0.976	0.985	0.997	1.009	1.022	1.037	1.051	1.066	**1.003**
Finance & insurance clerks												
Demand Projection	41,306	42,271	43,122	43,949	44,750	45,518	46,275	47,035	47,812	48,596	49,389	
Supply Projection	42,210	42,494	42,844	43,072	43,355	43,587	43,814	44,030	44,226	44,415	44,605	
Demand/Supply	0.979	0.995	1.006	1.020	1.032	1.044	1.056	1.068	1.081	1.094	1.107	**1.044**
Administrative support clerks												
Demand Projection	32,514	32,736	32,952	33,161	33,368	33,580	33,798	34,017	34,242	34,470	34,707	
Supply Projection	33,168	33,320	33,454	33,581	33,698	33,805	33,907	34,002	34,090	34,173	34,254	
Demand/Supply	0.980	0.982	0.985	0.987	0.990	0.993	0.997	1.000	1.004	1.009	1.013	**0.995**
Library, correspondence & related information clerks												
Demand Projection	16,174	16,558	16,978	17,413	17,856	18,291	18,719	19,130	19,553	19,979	20,424	
Supply Projection	16,974	17,618	17,662	17,912	17,617	17,805	17,938	18,191	18,445	18,697	18,968	
Demand/Supply	0.953	0.940	0.961	0.972	1.014	1.027	1.044	1.052	1.060	1.069	1.077	**1.015**
Mail & message distribution occupations												
Demand Projection	10,209	10,332	10,577	10,839	11,092	11,346	11,590	11,808	12,044	12,289	12,536	
Supply Projection	10,182	10,239	10,509	10,619	10,873	10,979	11,142	11,248	11,362	11,470	11,588	
Demand/Supply	1.003	1.009	1.006	1.021	1.020	1.033	1.040	1.050	1.060	1.071	1.082	**1.036**
Recording, scheduling & distributing occupations												
Demand Projection	29,958	30,418	30,977	31,564	32,163	32,775	33,380	33,919	34,458	35,000	35,585	
Supply Projection	30,509	30,813	31,002	31,162	31,320	31,481	31,662	31,829	31,978	32,120	32,272	
Demand/Supply	0.982	0.987	0.999	1.013	1.027	1.041	1.054	1.066	1.078	1.090	1.103	**1.040**
Physical science professionals												
Demand Projection	7,115	7,265	7,395	7,495	7,609	7,723	7,854	7,977	8,112	8,248	8,382	
Supply Projection	7,498	7,666	7,867	8,014	8,060	8,254	8,416	8,624	8,832	9,039	9,245	
Demand/Supply	0.949	0.948	0.940	0.935	0.944	0.936	0.933	0.925	0.918	0.912	0.907	**0.932**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015 (Cont.)

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Life science professionals												
Demand Projection	2,076	2,134	2,194	2,254	2,313	2,367	2,424	2,484	2,551	2,622	2,695	
Supply Projection	2,042	1,990	2,226	1,780	2,056	2,052	2,252	2,410	2,477	2,550	2,625	
Demand/Supply*	1.017	1.072	0.985	1.266	1.125	1.153	1.076	1.031	1.030	1.028	1.026	**1.074**
Civil, mechanical, electrical & chemical engineers												
Demand Projection	18,026	18,417	18,778	19,114	19,402	19,698	20,006	20,323	20,683	21,068	21,458	
Supply Projection	18,186	18,349	18,584	18,860	19,062	19,342	19,599	19,872	20,150	20,431	20,712	
Demand/Supply	0.991	1.004	1.010	1.013	1.018	1.018	1.021	1.023	1.026	1.031	1.036	**1.017**
Other engineers												
Demand Projection	10,639	10,915	11,167	11,376	11,594	11,812	12,052	12,280	12,529	12,786	13,039	
Supply Projection	11,087	11,141	11,100	11,459	10,861	11,082	11,046	11,225	11,419	11,627	11,846	
Demand/Supply	0.960	0.980	1.006	0.993	1.068	1.066	1.091	1.094	1.097	1.100	1.101	**1.050**
Architects, urban planners & land surveyors												
Demand Projection	5,018	5,133	5,235	5,333	5,414	5,493	5,573	5,663	5,773	5,893	6,014	
Supply Projection	5,221	5,294	5,301	5,351	5,304	5,361	5,395	5,475	5,566	5,667	5,778	
Demand/Supply	0.961	0.970	0.987	0.997	1.021	1.025	1.033	1.034	1.037	1.040	1.041	**1.013**
Mathematicians, statisticians & actuaries												
Demand Projection	627	645	665	684	703	720	737	756	778	802	826	
Supply Projection	603	640	632	613	613	639	673	717	761	804	846	
Demand/Supply	1.039	1.008	1.053	1.115	1.146	1.127	1.095	1.054	1.022	0.997	0.976	**1.058**
Computer & information systems professionals												
Demand Projection	27,938	28,496	29,072	29,620	30,146	30,628	31,118	31,636	32,249	32,901	33,563	
Supply Projection	28,985	29,667	30,031	30,562	30,847	31,330	31,763	32,250	32,739	33,238	33,666	
Demand/Supply	0.964	0.961	0.968	0.969	0.977	0.978	0.980	0.981	0.985	0.990	0.997	**0.977**
Technical occupations in physical sciences												
Demand Projection	7,144	7,290	7,433	7,548	7,673	7,790	7,921	8,046	8,186	8,330	8,473	
Supply Projection	7,312	7,449	7,348	7,583	7,412	7,537	7,565	7,656	7,748	7,840	7,931	
Demand/Supply	0.977	0.979	1.012	0.995	1.035	1.034	1.047	1.051	1.057	1.063	1.068	**1.029**
Technical occupations in life sciences												
Demand Projection	3,392	3,465	3,537	3,610	3,680	3,748	3,818	3,891	3,972	4,057	4,144	
Supply Projection	3,684	3,682	3,737	3,487	3,664	3,650	3,759	3,828	3,902	3,979	4,057	
Demand/Supply	0.921	0.941	0.947	1.035	1.004	1.027	1.016	1.016	1.018	1.020	1.021	**0.997**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015 (Cont.)

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Technical occupations in civil, mechanical & industrial engineering												
Demand Projection	6,973	7,183	7,331	7,483	7,573	7,711	7,852	7,997	8,146	8,307	8,475	
Supply Projection	7,103	7,202	7,229	7,177	7,214	7,231	7,295	7,362	7,426	7,496	7,567	
Demand/Supply*	0.982	0.997	1.014	1.043	1.050	1.066	1.076	1.086	1.097	1.108	1.120	**1.068**
Technical occupations in electronics & electrical engineering												
Demand Projection	17,463	17,735	18,007	18,276	18,533	18,805	19,083	19,345	19,616	19,894	20,184	
Supply Projection	18,097	18,114	18,128	18,171	18,232	18,271	18,315	18,350	18,385	18,421	18,461	
Demand/Supply	0.965	0.979	0.993	1.006	1.017	1.029	1.042	1.054	1.067	1.080	1.093	**1.030**
Technical occupations in architecture, drafting, surveying & mapping												
Demand Projection	8,781	8,990	9,190	9,377	9,538	9,692	9,851	10,022	10,227	10,449	10,674	
Supply Projection	8,605	8,857	8,887	9,203	9,370	9,529	9,655	9,770	9,900	10,039	10,182	
Demand/Supply	1.020	1.015	1.034	1.019	1.018	1.017	1.020	1.026	1.033	1.041	1.048	**1.027**
Other technical inspectors & regulatory officers												
Demand Projection	4,947	5,095	5,222	5,341	5,439	5,549	5,665	5,784	5,913	6,049	6,187	
Supply Projection	5,073	5,118	5,117	5,385	5,517	5,656	5,770	5,868	5,972	6,081	6,190	
Demand/Supply	0.975	0.995	1.020	0.992	0.986	0.981	0.982	0.986	0.990	0.995	0.999	**0.991**
Transportation officers & controllers												
Demand Projection	3,072	3,104	3,182	3,265	3,345	3,426	3,505	3,574	3,649	3,727	3,805	
Supply Projection	2,704	2,791	2,722	2,754	2,864	2,895	2,967	3,003	3,044	3,085	3,128	
Demand/Supply	1.136	1.112	1.169	1.186	1.168	1.183	1.181	1.190	1.199	1.208	1.217	**1.177**
Technical occupations in computer & information systems												
Demand Projection	6,747	6,974	7,210	7,438	7,664	7,879	8,097	8,321	8,573	8,837	9,108	
Supply Projection	7,077	7,216	7,876	8,094	8,485	8,658	8,848	9,009	9,192	9,391	9,598	
Demand/Supply	0.953	0.966	0.915	0.919	0.903	0.910	0.915	0.924	0.933	0.941	0.949	**0.930**
Physicians, dentists & veterinarians												
Demand Projection	8,206	8,449	8,689	8,915	9,145	9,376	9,617	9,865	10,121	10,380	10,656	
Supply Projection	8,174	8,606	8,727	8,927	8,845	8,972	9,048	9,194	9,349	9,509	9,678	
Demand/Supply	1.004	0.982	0.996	0.999	1.034	1.045	1.063	1.073	1.083	1.092	1.101	**1.043**
Optometrists, chiropractors & other health professionals												
Demand Projection	1,342	1,393	1,443	1,491	1,540	1,590	1,643	1,696	1,750	1,804	1,863	
Supply Projection	1,246	1,357	1,412	1,494	1,566	1,627	1,677	1,719	1,753	1,788	1,824	
Demand/Supply	1.077	1.026	1.022	0.998	0.983	0.977	0.980	0.987	0.998	1.009	1.021	**1.007**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015 (Cont.)

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Pharmacists, dietitians & nutritionists												
Demand Projection	3,392	3,469	3,551	3,643	3,739	3,841	3,941	4,031	4,115	4,198	4,291	
Supply Projection	3,205	3,247	3,321	3,390	3,405	3,463	3,507	3,567	3,623	3,678	3,738	
Demand/Supply*	1.058	1.068	1.069	1.075	1.098	1.109	1.124	1.130	1.136	1.141	1.148	**1.105**
Therapy & assessment professionals												
Demand Projection	5,288	5,400	5,510	5,615	5,723	5,834	5,950	6,069	6,190	6,312	6,443	
Supply Projection	5,454	5,600	5,724	5,568	5,590	5,644	5,760	5,910	6,062	6,214	6,371	
Demand/Supply	0.970	0.964	0.963	1.008	1.024	1.034	1.033	1.027	1.021	1.016	1.011	**1.006**
Nurse supervisors & registered nurses												
Demand Projection	26,505	27,123	27,729	28,302	28,892	29,492	30,121	30,761	31,410	32,065	32,761	
Supply Projection	26,879	27,405	27,918	28,855	29,504	30,386	31,176	32,002	32,756	33,508	34,208	
Demand/Supply	0.986	0.990	0.993	0.981	0.979	0.971	0.966	0.961	0.959	0.957	0.958	**0.973**
Medical technologists & technicians (except dental health)												
Demand Projection	8,879	9,084	9,287	9,480	9,676	9,871	10,075	10,287	10,509	10,737	10,977	
Supply Projection	9,011	9,169	9,418	9,593	9,818	10,013	10,197	10,397	10,576	10,753	10,929	
Demand/Supply	0.985	0.991	0.986	0.988	0.986	0.986	0.988	0.989	0.994	0.999	1.004	**0.991**
Technical occupations in dental health care												
Demand Projection	3,478	3,538	3,603	3,662	3,724	3,782	3,845	3,907	3,972	4,038	4,108	
Supply Projection	3,316	3,365	3,126	3,116	3,077	3,109	3,153	3,200	3,249	3,298	3,348	
Demand/Supply	1.049	1.051	1.153	1.175	1.210	1.216	1.220	1.221	1.223	1.224	1.227	**1.179**
Other technical occupations in health care (except dental)												
Demand Projection	13,351	13,625	13,901	14,169	14,447	14,730	15,023	15,315	15,609	15,905	16,220	
Supply Projection	13,779	13,809	14,154	14,079	14,279	14,490	14,756	15,051	15,343	15,632	15,923	
Demand/Supply	0.969	0.987	0.982	1.006	1.012	1.017	1.018	1.018	1.017	1.017	1.019	**1.006**
Assisting occupations in support of health services												
Demand Projection	22,762	23,298	23,829	24,341	24,871	25,412	25,972	26,533	27,099	27,666	28,274	
Supply Projection	22,521	22,889	23,099	23,814	24,436	24,975	25,481	25,880	26,268	26,649	27,038	
Demand/Supply	1.011	1.018	1.032	1.022	1.018	1.017	1.019	1.025	1.032	1.038	1.046	**1.025**
Judges, lawyers & Quebec notaries												
Demand Projection	6,974	7,134	7,294	7,442	7,577	7,695	7,813	7,948	8,118	8,303	8,489	
Supply Projection	7,153	7,523	7,824	8,254	8,547	8,875	9,175	9,486	9,803	10,130	10,461	
Demand/Supply	0.975	0.948	0.932	0.902	0.887	0.867	0.852	0.838	0.828	0.820	0.811	**0.878**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015 (Cont.)

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Psychologists, social workers, counsellors, clergy & probation officers												
Demand Projection	11,902	12,194	12,497	12,792	13,103	13,416	13,738	14,062	14,391	14,724	15,068	
Supply Projection	12,008	12,240	12,373	13,245	14,240	15,003	15,809	16,484	17,182	17,877	18,573	
Demand/Supply*	0.991	0.996	1.010	0.966	0.920	0.894	0.869	0.853	0.838	0.824	0.811	**0.907**
Policy & program officers, researchers & consultants												
Demand Projection	10,067	10,335	10,607	10,868	11,126	11,378	11,640	11,911	12,209	12,519	12,836	
Supply Projection	10,253	10,395	10,792	11,536	12,129	12,666	13,129	13,553	14,000	14,459	14,928	
Demand/Supply	0.982	0.994	0.983	0.942	0.917	0.898	0.887	0.879	0.872	0.866	0.860	**0.916**
University professors & assistants												
Demand Projection	10,044	10,195	10,335	10,482	10,630	10,808	11,026	11,271	11,542	11,835	12,149	
Supply Projection	10,461	10,444	10,690	10,968	11,396	11,740	12,106	12,471	12,855	13,250	13,643	
Demand/Supply	0.960	0.976	0.967	0.956	0.933	0.921	0.911	0.904	0.898	0.893	0.890	**0.928**
College & other vocational instructors												
Demand Projection	9,995	10,125	10,248	10,375	10,504	10,652	10,828	11,022	11,234	11,462	11,706	
Supply Projection	10,764	11,014	11,291	11,566	11,821	12,087	12,344	12,604	12,862	13,119	13,375	
Demand/Supply	0.929	0.919	0.908	0.897	0.889	0.881	0.877	0.874	0.873	0.874	0.875	**0.891**
Secondary & elementary school teachers & educational counsellors												
Demand Projection	36,013	36,650	37,234	37,851	38,473	39,232	40,169	41,224	42,385	43,641	44,990	
Supply Projection	37,032	36,643	37,825	39,745	41,444	43,246	44,867	46,547	48,278	50,077	51,751	
Demand/Supply	0.972	1.000	0.984	0.952	0.928	0.907	0.895	0.886	0.878	0.871	0.869	**0.922**
Paralegals, social services workers & occ. in education & religion, n.e.c.												
Demand Projection	36,729	37,486	38,238	38,958	39,690	40,428	41,204	42,006	42,850	43,716	44,625	
Supply Projection	37,747	38,673	39,670	40,416	41,333	42,097	42,892	43,667	44,434	45,114	45,799	
Demand/Supply	0.973	0.969	0.964	0.964	0.960	0.960	0.961	0.962	0.964	0.969	0.974	**0.966**
Librarians, archivists, conservators & curators												
Demand Projection	1,341	1,374	1,411	1,448	1,487	1,526	1,565	1,605	1,647	1,690	1,733	
Supply Projection	1,369	1,350	1,483	1,588	1,718	1,811	1,898	1,975	2,055	2,135	2,216	
Demand/Supply	0.979	1.018	0.952	0.912	0.865	0.842	0.825	0.812	0.802	0.792	0.782	**0.871**
Writing, translating & public relations professionals												
Demand Projection	7,668	7,795	7,935	8,074	8,220	8,361	8,502	8,643	8,796	8,954	9,113	
Supply Projection	7,709	7,738	7,681	7,964	8,321	8,614	8,919	9,173	9,431	9,689	9,948	
Demand/Supply	0.995	1.007	1.033	1.014	0.988	0.971	0.953	0.942	0.933	0.924	0.916	**0.971**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015 (Cont.)

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Creative & performing artists												
Demand Projection	7,194	7,315	7,446	7,582	7,729	7,885	8,051	8,222	8,403	8,592	8,787	
Supply Projection	7,476	7,589	7,850	7,542	7,986	8,103	8,424	8,684	8,948	9,217	9,491	
Demand/Supply*	0.962	0.964	0.949	1.005	0.968	0.973	0.956	0.947	0.939	0.932	0.926	**0.956**
Technical occupations in libraries, archives, museums & art galleries												
Demand Projection	2,042	2,083	2,129	2,176	2,227	2,280	2,335	2,391	2,449	2,509	2,570	
Supply Projection	2,042	1,958	2,019	1,816	1,925	1,869	1,931	1,953	1,977	2,002	2,077	
Demand/Supply	1.000	1.064	1.054	1.198	1.157	1.220	1.210	1.224	1.239	1.253	1.237	**1.169**
Photographers, graphic arts technicians etc												
Demand Projection	2,604	2,675	2,754	2,831	2,909	2,982	3,054	3,127	3,211	3,299	3,387	
Supply Projection	2,538	2,134	2,291	2,382	2,673	2,783	2,907	2,975	3,052	3,134	3,217	
Demand/Supply	1.026	1.253	1.202	1.188	1.088	1.072	1.051	1.051	1.052	1.053	1.053	**1.099**
Announcers & other performers												
Demand Projection	1,361	1,414	1,475	1,536	1,601	1,665	1,729	1,790	1,853	1,916	1,979	
Supply Projection	1,299	1,369	1,443	1,471	1,624	1,686	1,777	1,835	1,892	1,948	2,005	
Demand/Supply	1.048	1.033	1.023	1.044	0.986	0.987	0.973	0.975	0.979	0.983	0.987	**1.002**
Creative designers & craftspersons												
Demand Projection	9,471	9,641	9,826	10,002	10,175	10,335	10,497	10,659	10,845	11,043	11,246	
Supply Projection	9,695	9,860	10,014	9,907	10,003	10,057	10,181	10,314	10,451	10,588	10,727	
Demand/Supply	0.977	0.978	0.981	1.010	1.017	1.028	1.031	1.033	1.038	1.043	1.048	**1.017**
Athletes, coaches, referees & related occupations												
Demand Projection	9,635	9,759	9,896	10,036	10,187	10,340	10,499	10,657	10,820	10,988	11,158	
Supply Projection	10,103	10,111	10,176	10,143	10,148	10,172	10,211	10,264	10,319	10,380	10,452	
Demand/Supply	0.954	0.965	0.972	0.989	1.004	1.016	1.028	1.038	1.049	1.059	1.068	**1.013**
Sales & service supervisors												
Demand Projection	31,073	31,418	31,790	32,181	32,562	32,939	33,310	33,661	34,005	34,339	34,694	
Supply Projection	31,617	31,778	31,885	31,979	32,053	32,111	32,171	32,226	32,273	32,319	32,375	
Demand/Supply	0.983	0.989	0.997	1.006	1.016	1.026	1.035	1.045	1.054	1.062	1.072	**1.026**
Sales representatives, wholesale trade												
Demand Projection	19,396	19,720	20,080	20,475	20,882	21,304	21,715	22,077	22,429	22,775	23,162	
Supply Projection	19,285	19,203	19,704	19,924	20,374	20,659	20,978	21,230	21,448	21,671	21,879	
Demand/Supply	1.006	1.027	1.019	1.028	1.025	1.031	1.035	1.040	1.046	1.051	1.059	**1.033**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015 (Cont.)

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Technical sales specialists, wholesale trade												
Demand Projection	14,439	14,603	14,785	14,972	15,169	15,366	15,563	15,739	15,915	16,090	16,280	
Supply Projection	14,450	14,595	14,726	14,855	14,978	15,092	15,203	15,307	15,406	15,501	15,593	
Demand/Supply*	0.999	1.001	1.004	1.008	1.013	1.018	1.024	1.028	1.033	1.038	1.044	**1.019**
Insurance & real estate sales occupations & buyers												
Demand Projection	17,923	18,340	18,668	18,993	19,300	19,589	19,862	20,140	20,409	20,675	20,942	
Supply Projection	18,159	18,489	18,787	19,072	19,343	19,609	19,865	20,115	20,353	20,584	20,808	
Demand/Supply	0.987	0.992	0.994	0.996	0.998	0.999	1.000	1.001	1.003	1.004	1.006	**0.998**
Retail salespersons & sales clerks												
Demand Projection	61,423	62,723	64,148	65,841	67,615	69,500	71,290	72,820	74,227	75,562	77,119	
Supply Projection	64,698	66,236	67,100	68,525	69,330	70,448	71,466	72,343	73,027	73,644	74,391	
Demand/Supply	0.949	0.947	0.956	0.961	0.975	0.987	0.998	1.007	1.016	1.026	1.037	**0.987**
Cashiers												
Demand Projection	35,294	35,879	36,531	37,286	38,069	38,886	39,667	40,348	40,976	41,569	42,247	
Supply Projection	36,860	36,644	36,790	36,390	36,611	36,622	36,605	36,624	36,620	36,716	36,815	
Demand/Supply	0.958	0.979	0.993	1.025	1.040	1.062	1.084	1.102	1.119	1.132	1.148	**1.058**
Chefs & cooks												
Demand Projection	26,097	26,879	27,709	28,516	29,254	29,947	30,651	31,363	32,054	32,715	33,369	
Supply Projection	27,276	27,403	28,031	28,583	29,389	29,795	30,122	30,416	30,749	31,038	31,363	
Demand/Supply	0.957	0.981	0.989	0.998	0.995	1.005	1.018	1.031	1.042	1.054	1.064	**1.012**
Occupations in food & beverage service												
Demand Projection	36,318	37,401	38,560	39,683	40,698	41,644	42,600	43,570	44,507	45,397	46,271	
Supply Projection	38,716	39,388	39,514	39,764	39,280	39,526	39,564	39,751	39,912	40,088	40,314	
Demand/Supply	0.938	0.950	0.976	0.998	1.036	1.054	1.077	1.096	1.115	1.132	1.148	**1.047**
Police officers & fire-fighters												
Demand Projection	8,889	9,034	9,189	9,337	9,489	9,644	9,807	9,972	10,135	10,295	10,460	
Supply Projection	8,834	9,011	9,128	9,282	9,442	9,579	9,703	9,838	9,968	10,093	10,158	
Demand/Supply	1.006	1.003	1.007	1.006	1.005	1.007	1.011	1.014	1.017	1.020	1.026	**1.011**
Other occupations in protective service												
Demand Projection	3,238	3,414	3,604	3,787	3,975	4,161	4,353	4,549	4,749	4,949	5,155	
Supply Projection	2,862	2,770	3,110	3,049	3,778	3,937	4,285	4,480	4,686	4,885	5,087	
Demand/Supply	1.131	1.232	1.159	1.242	1.052	1.057	1.016	1.015	1.013	1.013	1.013	**1.086**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015 (Cont.)

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Security guards & related occupations												
Demand Projection	8,680	8,848	9,020	9,184	9,334	9,466	9,598	9,745	9,924	10,116	10,309	
Supply Projection	9,433	9,580	9,505	9,804	9,588	9,750	9,823	9,987	10,160	10,340	10,526	
Demand/Supply*	0.920	0.924	0.949	0.937	0.974	0.971	0.977	0.976	0.977	0.978	0.979	**0.960**
Occupations in travel & accommodation												
Demand Projection	7,389	7,581	7,834	8,086	8,316	8,532	8,744	8,955	9,187	9,425	9,661	
Supply Projection	7,052	6,793	7,171	7,540	8,000	8,219	8,410	8,521	8,641	8,766	8,889	
Demand/Supply	1.048	1.116	1.092	1.072	1.040	1.038	1.040	1.051	1.063	1.075	1.087	**1.066**
Tour & recreational guides & casino occupations												
Demand Projection	1,237	1,262	1,292	1,323	1,355	1,386	1,416	1,446	1,477	1,508	1,539	
Supply Projection	1,217	1,280	1,211	1,463	1,664	1,773	1,867	1,908	1,950	1,993	2,035	
Demand/Supply	1.017	0.986	1.067	0.904	0.814	0.782	0.758	0.758	0.757	0.757	0.756	**0.851**
Other occupations in travel, accommodation, amusement & recreation												
Demand Projection	4,387	4,454	4,535	4,616	4,700	4,782	4,862	4,940	5,018	5,097	5,174	
Supply Projection	4,899	4,790	4,830	4,812	4,814	4,831	4,850	4,878	4,908	4,943	4,987	
Demand/Supply	0.895	0.930	0.939	0.959	0.976	0.990	1.002	1.013	1.022	1.031	1.038	**0.981**
Childcare & home support workers												
Demand Projection	26,447	27,068	27,692	28,314	28,961	29,650	30,403	31,193	32,025	32,892	33,805	
Supply Projection	29,253	30,435	31,188	31,451	31,814	32,349	32,978	33,701	34,425	35,157	35,917	
Demand/Supply	0.904	0.889	0.888	0.900	0.910	0.917	0.922	0.926	0.930	0.936	0.941	**0.915**
Technical occupations in personal service												
Demand Projection	8,945	9,091	9,271	9,454	9,662	9,865	10,061	10,247	10,436	10,628	10,816	
Supply Projection	8,984	8,956	9,143	9,230	9,478	9,602	9,754	9,862	9,969	10,073	10,179	
Demand/Supply	0.996	1.015	1.014	1.024	1.020	1.027	1.032	1.039	1.047	1.055	1.063	**1.030**
Other occupations in personal service												
Demand Projection	7,204	7,270	7,349	7,432	7,523	7,614	7,702	7,784	7,867	7,950	8,035	
Supply Projection	7,270	7,300	7,320	7,328	7,345	7,364	7,388	7,411	7,432	7,453	7,475	
Demand/Supply	0.991	0.996	1.004	1.014	1.024	1.034	1.043	1.050	1.059	1.067	1.075	**1.032**
Cleaners												
Demand Projection	48,419	49,586	50,753	51,890	52,949	53,958	54,984	56,070	57,276	58,534	59,819	
Supply Projection	51,802	53,594	54,803	55,837	56,139	56,807	57,325	57,970	58,639	59,301	59,970	
Demand/Supply	0.935	0.925	0.926	0.929	0.943	0.950	0.959	0.967	0.977	0.987	0.997	**0.954**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015 (Cont.)

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Butchers & bakers, retail & wholesale												
Demand Projection	7,104	7,248	7,416	7,600	7,792	7,987	8,176	8,341	8,498	8,649	8,819	
Supply Projection	7,114	7,236	7,250	7,165	7,426	7,490	7,646	7,744	7,830	7,910	8,001	
Demand/Supply*	0.999	1.002	1.023	1.061	1.049	1.066	1.069	1.077	1.085	1.093	1.102	**1.057**
Food counter attendants, kitchen helpers & related occupations												
Demand Projection	30,057	31,026	32,058	33,057	33,974	34,835	35,708	36,593	37,453	38,276	39,093	
Supply Projection	31,894	32,443	32,883	33,390	33,830	34,169	34,476	34,817	35,166	35,578	36,095	
Demand/Supply	0.942	0.956	0.975	0.990	1.004	1.019	1.036	1.051	1.065	1.076	1.083	**1.018**
Other sales & related occupations												
Demand Projection	23,559	24,079	24,665	25,366	26,104	26,887	27,630	28,265	28,854	29,414	30,071	
Supply Projection	25,522	25,894	26,568	26,491	26,801	27,075	27,469	27,830	28,138	28,439	28,835	
Demand/Supply	0.923	0.930	0.928	0.958	0.974	0.993	1.006	1.016	1.025	1.034	1.043	**0.985**
Other elemental service occupations												
Demand Projection	3,233	3,342	3,463	3,586	3,716	3,844	3,970	4,091	4,214	4,337	4,462	
Supply Projection	2,957	2,906	2,877	3,133	3,481	3,663	3,880	3,970	4,057	4,144	4,236	
Demand/Supply	1.093	1.150	1.204	1.145	1.068	1.049	1.023	1.031	1.039	1.047	1.053	**1.082**
Contractors & supervisors, trades & related workers												
Demand Projection	33,448	34,144	34,517	34,949	35,098	35,516	35,940	36,363	36,741	37,150	37,588	
Supply Projection	33,475	33,706	33,891	34,063	34,216	34,352	34,484	34,606	34,716	34,818	34,918	
Demand/Supply	0.999	1.013	1.018	1.026	1.026	1.034	1.042	1.051	1.058	1.067	1.076	**1.037**
Supervisors, railway & motor transportation occupations												
Demand Projection	5,767	5,781	5,812	5,845	5,877	5,910	5,942	5,970	5,999	6,030	6,061	
Supply Projection	5,834	5,861	5,877	5,893	5,906	5,917	5,928	5,938	5,947	5,956	5,966	
Demand/Supply	0.988	0.986	0.989	0.992	0.995	0.999	1.002	1.005	1.009	1.012	1.016	**0.999**
Plumbers, pipefitters & gas fitters												
Demand Projection	12,382	12,938	13,202	13,512	13,585	13,887	14,199	14,511	14,784	15,079	15,395	
Supply Projection	13,011	13,216	13,348	13,470	13,282	13,315	13,336	13,450	13,549	13,668	13,716	
Demand/Supply	0.952	0.979	0.989	1.003	1.023	1.043	1.065	1.079	1.091	1.103	1.122	**1.041**
Carpenters & cabinetmakers												
Demand Projection	21,186	22,174	22,617	23,161	23,236	23,744	24,261	24,793	25,251	25,757	26,308	
Supply Projection	21,527	21,893	22,040	22,261	22,155	22,281	22,430	22,672	22,858	23,066	23,231	
Demand/Supply	0.984	1.013	1.026	1.040	1.049	1.066	1.082	1.094	1.105	1.117	1.132	**1.064**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015 (Cont.)

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Masonry & plastering trades												
Demand Projection	9,589	10,111	10,312	10,578	10,572	10,822	11,072	11,333	11,548	11,787	12,051	
Supply Projection	9,543	9,688	9,656	9,686	9,857	9,911	10,073	10,221	10,350	10,501	10,842	
Demand/Supply*	1.005	1.044	1.068	1.092	1.073	1.092	1.099	1.109	1.116	1.123	1.132	**1.087**
Other construction trades												
Demand Projection	12,269	13,043	13,362	13,776	13,806	14,198	14,592	14,998	15,338	15,714	16,126	
Supply Projection	12,315	13,057	13,360	13,984	14,293	14,486	14,728	14,979	15,198	15,457	15,698	
Demand/Supply	0.996	0.999	1.000	0.985	0.966	0.980	0.991	1.001	1.009	1.017	1.027	**0.997**
Electrical trades & telecommunications occupations												
Demand Projection	20,362	21,215	21,669	22,198	22,385	22,898	23,419	23,940	24,406	24,907	25,439	
Supply Projection	20,453	20,890	20,984	21,306	21,205	21,269	21,326	21,455	21,567	21,711	21,844	
Demand/Supply	0.996	1.016	1.033	1.042	1.056	1.077	1.098	1.116	1.132	1.147	1.165	**1.080**
Stationary engineers & power station & system operators												
Demand Projection	2,604	2,659	2,716	2,767	2,818	2,866	2,919	2,968	3,018	3,069	3,119	
Supply Projection	2,751	2,774	2,793	2,793	2,806	2,814	2,828	2,844	2,858	2,872	2,886	
Demand/Supply	0.947	0.959	0.972	0.991	1.004	1.018	1.032	1.044	1.056	1.068	1.081	**1.016**
Machinists & related occupations												
Demand Projection	5,236	5,335	5,468	5,578	5,701	5,803	5,916	6,019	6,134	6,256	6,379	
Supply Projection	5,181	5,324	5,483	5,575	5,649	5,697	5,754	5,798	5,835	5,872	5,912	
Demand/Supply	1.011	1.002	0.997	1.001	1.009	1.019	1.028	1.038	1.051	1.065	1.079	**1.027**
Metal forming, shaping & erecting trades												
Demand Projection	23,778	24,510	25,111	25,688	26,126	26,692	27,286	27,853	28,418	29,017	29,633	
Supply Projection	24,566	24,705	25,201	25,271	25,681	25,802	26,093	26,298	26,512	26,751	27,000	
Demand/Supply	0.968	0.992	0.996	1.017	1.017	1.034	1.046	1.059	1.072	1.085	1.098	**1.035**
Machinery & transportation equipment mechanics (except motor vehicle)												
Demand Projection	24,182	24,688	25,151	25,617	26,016	26,495	26,987	27,438	27,880	28,334	28,805	
Supply Projection	23,951	24,188	24,284	24,305	24,405	24,482	24,587	24,690	24,753	24,818	24,888	
Demand/Supply	1.010	1.021	1.036	1.054	1.066	1.082	1.098	1.111	1.126	1.142	1.157	**1.082**
Automotive service technicians												
Demand Projection	16,700	16,987	17,334	17,709	18,108	18,517	18,910	19,268	19,622	19,975	20,342	
Supply Projection	17,116	17,279	17,709	17,596	17,916	18,009	18,193	18,353	18,472	18,587	18,715	
Demand/Supply	0.976	0.983	0.979	1.006	1.011	1.028	1.039	1.050	1.062	1.075	1.087	**1.027**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015 (Cont.)

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Other mechanics												
Demand Projection	3,082	3,134	3,183	3,237	3,286	3,342	3,397	3,448	3,496	3,545	3,597	
Supply Projection	3,135	3,169	3,193	3,198	3,188	3,199	3,211	3,230	3,248	3,265	3,283	
Demand/Supply*	0.983	0.989	0.997	1.012	1.031	1.045	1.058	1.068	1.077	1.086	1.096	**1.040**
Upholsterers, tailors, shoe repairers, jewellers & related occupations												
Demand Projection	3,125	3,184	3,259	3,331	3,410	3,483	3,557	3,625	3,696	3,768	3,844	
Supply Projection	3,284	3,477	3,503	3,345	3,357	3,346	3,407	3,465	3,524	3,581	3,643	
Demand/Supply	0.952	0.916	0.930	0.996	1.016	1.041	1.044	1.046	1.049	1.052	1.055	**1.009**
Printing press operators, commercial divers & other trades, n.e.c.												
Demand Projection	4,318	4,375	4,444	4,507	4,572	4,631	4,693	4,752	4,817	4,885	4,955	
Supply Projection	4,464	4,521	4,558	4,602	4,637	4,676	4,712	4,747	4,780	4,810	4,840	
Demand/Supply	0.967	0.968	0.975	0.979	0.986	0.990	0.996	1.001	1.008	1.016	1.024	**0.992**
Other installers, repairers & servicers												
Demand Projection	8,515	8,792	8,988	9,212	9,361	9,586	9,809	10,020	10,215	10,415	10,630	
Supply Projection	8,661	8,735	9,067	9,200	9,400	9,485	9,612	9,725	9,845	9,957	10,075	
Demand/Supply	0.983	1.007	0.991	1.001	0.996	1.011	1.021	1.030	1.038	1.046	1.055	**1.016**
Heavy equipment operators												
Demand Projection	15,841	16,571	16,935	17,349	17,478	17,894	18,327	18,753	19,127	19,527	19,950	
Supply Projection	17,991	18,748	19,001	19,254	19,358	19,572	19,662	20,208	20,515	20,842	21,152	
Demand/Supply	0.881	0.884	0.891	0.901	0.903	0.914	0.923	0.928	0.932	0.937	0.943	**0.912**
Crane operators, drillers & blasters												
Demand Projection	3,091	3,195	3,251	3,311	3,334	3,394	3,457	3,518	3,573	3,632	3,693	
Supply Projection	3,250	3,342	3,362	3,390	3,413	3,436	3,459	3,482	3,501	3,520	3,539	
Demand/Supply	0.951	0.956	0.967	0.977	0.977	0.988	0.999	1.010	1.021	1.032	1.044	**0.983**
Motor vehicle & transit drivers												
Demand Projection	56,065	56,910	58,269	59,721	61,055	62,496	63,906	65,159	66,461	67,810	69,184	
Supply Projection	57,697	58,167	60,329	61,739	63,648	64,931	66,316	67,376	68,387	69,376	70,367	
Demand/Supply	0.972	0.978	0.966	0.967	0.959	0.962	0.964	0.967	0.972	0.977	0.983	**0.970**
Train crew operating occupations												
Demand Projection	1,889	1,902	1,939	1,979	2,017	2,055	2,092	2,124	2,158	2,194	2,230	
Supply Projection	1,847	1,878	1,897	1,846	1,863	1,855	1,871	1,883	1,895	1,907	1,919	
Demand/Supply	1.023	1.013	1.022	1.072	1.083	1.108	1.118	1.128	1.139	1.151	1.162	**1.093**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015 (Cont.)

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Other transport equipment operators & related workers												
Demand Projection	2,123	2,146	2,199	2,256	2,310	2,366	2,419	2,466	2,516	2,568	2,621	
Supply Projection	1,937	2,033	1,982	1,945	1,986	1,983	2,026	2,049	2,073	2,098	2,125	
Demand/Supply*	1.096	1.056	1.109	1.160	1.163	1.193	1.194	1.204	1.213	1.224	1.234	**1.168**
Longshore workers & material handlers												
Demand Projection	21,034	21,379	21,806	22,254	22,696	23,153	23,605	24,005	24,410	24,820	25,261	
Supply Projection	22,631	23,098	23,059	23,214	23,060	23,195	23,334	23,523	23,699	23,875	24,077	
Demand/Supply	0.929	0.926	0.946	0.959	0.984	0.998	1.012	1.021	1.030	1.040	1.049	**0.990**
Trades helpers & labourers												
Demand Projection	16,093	17,071	17,498	18,030	18,097	18,600	19,108	19,631	20,079	20,574	21,110	
Supply Projection	18,289	18,807	19,336	19,392	19,697	19,742	20,012	20,314	20,581	20,919	21,244	
Demand/Supply	0.880	0.908	0.905	0.930	0.919	0.942	0.955	0.966	0.976	0.983	0.994	**0.942**
Public works & other labourers, n.e.c.												
Demand Projection	4,682	4,761	4,842	4,928	4,999	5,079	5,159	5,237	5,317	5,400	5,485	
Supply Projection	5,087	5,144	5,186	5,206	5,237	5,264	5,300	5,336	5,370	5,404	5,442	
Demand/Supply	0.920	0.926	0.934	0.947	0.955	0.965	0.973	0.981	0.990	0.999	1.008	**0.963**
Contractors, operators & supervisors in agriculture, horticulture & aquaculture												
Demand Projection	55,044	55,210	55,009	55,343	55,584	55,788	55,979	56,117	56,244	56,375	56,514	
Supply Projection	58,817	61,445	62,105	62,835	63,369	64,434	65,573	66,830	67,968	69,097	70,216	
Demand/Supply	0.936	0.899	0.886	0.881	0.877	0.866	0.854	0.840	0.828	0.816	0.805	**0.862**
Agriculture & horticulture workers												
Demand Projection	12,607	12,671	12,573	12,713	12,815	12,904	12,987	13,042	13,087	13,132	13,182	
Supply Projection	12,823	12,717	13,066	13,391	14,568	14,889	15,357	15,594	15,756	15,940	16,138	
Demand/Supply	0.983	0.996	0.962	0.949	0.880	0.867	0.846	0.836	0.831	0.824	0.817	**0.890**
Supervisors, logging & forestry												
Demand Projection	479	497	508	526	539	554	569	584	598	613	629	
Supply Projection	422	454	485	488	481	498	515	534	551	568	583	
Demand/Supply	1.136	1.094	1.047	1.078	1.122	1.113	1.104	1.093	1.085	1.079	1.078	**1.094**
Supervisors, mining, oil & gas												
Demand Projection	10,656	10,807	10,911	10,976	11,058	11,162	11,288	11,393	11,490	11,582	11,667	
Supply Projection	10,993	11,114	11,212	11,305	11,389	11,466	11,542	11,614	11,678	11,738	11,798	
Demand/Supply	0.969	0.972	0.973	0.971	0.971	0.973	0.978	0.981	0.984	0.987	0.989	**0.977**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015 (Cont.)

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Underground miners, oil & gas drillers & related workers												
Demand Projection	14,267	14,422	14,527	14,585	14,672	14,778	14,912	15,020	15,117	15,207	15,287	
Supply Projection	14,662	14,745	14,802	14,851	14,896	14,938	14,985	15,030	15,070	15,109	15,152	
Demand/Supply*	0.973	0.978	0.981	0.982	0.985	0.989	0.995	0.999	1.003	1.006	1.009	**0.991**
Mine service workers & operators in oil & gas drilling												
Demand Projection	8,772	8,927	9,029	9,085	9,169	9,275	9,408	9,514	9,608	9,694	9,771	
Supply Projection	9,483	9,587	9,655	9,716	9,765	9,805	9,847	9,886	9,918	9,948	9,984	
Demand/Supply	0.925	0.931	0.935	0.935	0.939	0.946	0.955	0.962	0.969	0.974	0.979	**0.950**
Logging machinery operators												
Demand Projection	995	1,019	1,029	1,051	1,064	1,083	1,101	1,118	1,135	1,152	1,169	
Supply Projection	1,204	1,251	1,267	1,272	1,269	1,277	1,287	1,302	1,314	1,326	1,339	
Demand/Supply	0.827	0.815	0.812	0.826	0.838	0.848	0.855	0.859	0.864	0.868	0.873	**0.844**
Logging & forestry workers												
Demand Projection	1,484	1,489	1,498	1,523	1,541	1,562	1,583	1,603	1,622	1,642	1,662	
Supply Projection	1,872	1,976	1,996	1,985	1,958	1,967	1,984	2,013	2,039	2,065	2,091	
Demand/Supply	0.782	0.754	0.750	0.767	0.787	0.794	0.798	0.796	0.796	0.795	0.795	**0.783**
Fishing vessel masters & skippers & fishermen												
Demand Projection	82	82	83	83	83	84	84	84	85	85	86	
Supply Projection	84	85	76	75	74	74	74	74	74	75	75	
Demand/Supply	0.982	0.970	1.099	1.111	1.124	1.140	1.139	1.134	1.142	1.136	1.143	**1.102**
Other fishing & trapping occupations												
Demand Projection	119	119	119	120	120	121	121	121	121	122	122	
Supply Projection	136	145	143	141	137	136	135	136	136	136	136	
Demand/Supply	0.873	0.822	0.830	0.853	0.878	0.891	0.896	0.893	0.892	0.898	0.896	**0.875**
Primary production labourers												
Demand Projection	12,405	12,863	13,246	13,588	13,928	14,291	14,682	15,058	15,457	15,865	16,267	
Supply Projection	14,568	15,593	16,634	15,997	16,499	16,598	16,944	17,290	17,630	17,991	18,366	
Demand/Supply	0.852	0.825	0.796	0.849	0.844	0.861	0.867	0.871	0.877	0.882	0.886	**0.855**
Supervisors, processing occupations												
Demand Projection	7,094	7,209	7,341	7,448	7,565	7,670	7,787	7,893	8,007	8,126	8,245	
Supply Projection	6,990	7,036	7,094	7,128	7,178	7,217	7,262	7,303	7,342	7,380	7,418	
Demand/Supply	1.015	1.025	1.035	1.045	1.054	1.063	1.072	1.081	1.091	1.101	1.111	**1.083**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015 (Cont.)

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Supervisors, assembly & fabrication												
Demand Projection	5,210	5,250	5,306	5,352	5,403	5,444	5,489	5,531	5,578	5,629	5,681	
Supply Projection	5,105	5,116	5,126	5,128	5,144	5,153	5,168	5,180	5,192	5,203	5,214	
Demand/Supply*	1.021	1.026	1.035	1.044	1.050	1.057	1.062	1.068	1.074	1.082	1.090	**1.055**
Central control & process operators in manufacturing & processing												
Demand Projection	5,451	5,620	5,768	5,865	5,993	6,128	6,289	6,423	6,554	6,680	6,799	
Supply Projection	5,541	5,378	5,360	5,393	5,569	5,699	5,829	5,922	5,998	6,062	6,122	
Demand/Supply	0.984	1.045	1.076	1.088	1.076	1.075	1.079	1.085	1.093	1.102	1.110	**1.074**
Machine operators & related workers in metal & mineral products processing												
Demand Projection	2,520	2,594	2,664	2,725	2,779	2,837	2,900	2,959	3,022	3,090	3,159	
Supply Projection	2,789	2,739	2,909	2,856	2,891	2,895	2,927	2,965	3,005	3,049	3,095	
Demand/Supply	0.904	0.947	0.916	0.954	0.961	0.980	0.991	0.998	1.006	1.013	1.021	**0.972**
Machine operators & related workers in chemical, plastic & rubber processing												
Demand Projection	4,893	4,957	5,042	5,114	5,192	5,255	5,324	5,389	5,462	5,538	5,615	
Supply Projection	4,795	4,833	4,847	4,825	4,815	4,817	4,826	4,840	4,852	4,863	4,874	
Demand/Supply	1.021	1.026	1.040	1.060	1.078	1.091	1.103	1.113	1.126	1.139	1.152	**1.086**
Machine operators & related workers in pulp & paper & wood processing												
Demand Projection	3,776	3,837	3,926	3,995	4,074	4,135	4,203	4,267	4,340	4,420	4,500	
Supply Projection	3,836	3,811	3,857	3,831	3,886	3,896	3,935	3,961	3,992	4,024	4,061	
Demand/Supply	0.984	1.007	1.018	1.043	1.048	1.061	1.068	1.077	1.087	1.098	1.108	**1.055**
Machine operators & related workers in textile processing												
Demand Projection	218	224	234	242	251	258	266	273	281	290	299	
Supply Projection	299	320	264	267	256	272	288	293	301	309	318	
Demand/Supply	0.728	0.699	0.885	0.906	0.982	0.950	0.923	0.931	0.934	0.939	0.939	**0.892**
Machine operators & related workers in fabric, fur & leather products manuf.												
Demand Projection	2,721	2,766	2,830	2,883	2,942	2,991	3,043	3,092	3,147	3,205	3,264	
Supply Projection	3,057	3,110	3,097	3,135	3,148	3,171	3,195	3,216	3,235	3,255	3,276	
Demand/Supply	0.890	0.889	0.914	0.920	0.935	0.943	0.953	0.962	0.973	0.985	0.996	**0.942**
Machine operators & related workers in food, beverage & tobacco processing												
Demand Projection	9,234	9,349	9,517	9,650	9,802	9,918	10,049	10,170	10,310	10,461	10,614	
Supply Projection	9,427	9,517	9,577	9,637	9,688	9,731	9,777	9,820	9,859	9,896	9,939	
Demand/Supply	0.980	0.982	0.994	1.001	1.012	1.019	1.028	1.036	1.046	1.057	1.068	**1.020**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Results of Alberta's Occupational Demand and Supply for 140 Occupations, 2005-2015 (Cont.)

Occupational Projections	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2005-2015
Printing machine operators & related occupations												
Demand Projection	2,240	2,305	2,388	2,462	2,543	2,613	2,686	2,756	2,834	2,915	2,999	
Supply Projection	2,402	2,620	2,708	2,812	2,807	2,836	2,854	2,888	2,927	2,969	3,016	
Demand/Supply*	0.932	0.880	0.882	0.875	0.906	0.921	0.941	0.954	0.968	0.982	0.994	**0.931**
Machining, metalworking, woodworking & related machine operators												
Demand Projection	4,873	4,946	5,038	5,115	5,195	5,264	5,340	5,411	5,490	5,574	5,660	
Supply Projection	5,044	5,086	5,114	5,151	5,185	5,209	5,235	5,256	5,275	5,295	5,316	
Demand/Supply	0.966	0.972	0.985	0.993	1.002	1.011	1.020	1.029	1.041	1.053	1.065	**1.012**
Mechanical, electrical & electronics assemblers												
Demand Projection	3,538	3,634	3,761	3,865	3,979	4,073	4,176	4,272	4,382	4,499	4,618	
Supply Projection	3,585	3,442	3,778	3,947	4,321	4,397	4,529	4,582	4,651	4,725	4,808	
Demand/Supply	0.987	1.056	0.996	0.979	0.921	0.926	0.922	0.932	0.942	0.952	0.960	**0.961**
Other assembly & related occupations												
Demand Projection	7,632	7,819	8,044	8,239	8,436	8,616	8,810	8,990	9,186	9,395	9,610	
Supply Projection	7,980	8,445	8,654	8,946	8,955	9,067	9,166	9,283	9,412	9,548	9,698	
Demand/Supply	0.956	0.926	0.930	0.921	0.942	0.950	0.961	0.968	0.976	0.984	0.991	**0.955**
Labourers in processing, manufacturing & utilities												
Demand Projection	12,902	13,254	13,735	14,134	14,575	14,942	15,340	15,707	16,120	16,558	17,006	
Supply Projection	13,901	14,118	14,794	14,961	15,585	15,714	16,031	16,215	16,458	16,719	17,025	
Demand/Supply	0.928	0.939	0.928	0.945	0.935	0.951	0.957	0.969	0.979	0.990	0.999	**0.956**

***Supply Shortage** if Greater Than 1
Supply Surplus if Less Than 1

Alberta
HUMAN RESOURCES AND EMPLOYMENT

the people & workplace department

Results of Alberta's Occupational Demand and Supply Outlook, 2005 –2015

FEEDBACK

We'd like to hear from you

What industry sector are you representing?

Do you agree or disagree with the growth projections for your sector? Why or why not?

Any suggestions about what you would like to see in the future?

Please return this form to:
lfs.analyst@gov.ab.ca

Alberta Human Resources and Employment
10808 – 99th Avenue
2nd Floor
Data Development and Evaluation
Edmonton AB T5K 0G5
Fax: (780) 422-5070